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ABSTRACT

This module on the bottonhole machine, one in a series dealing with industrial sewing machines, their attachments, and operation, covers two topics: performing special operations on the buttonhole machine (parts and purpose) and performing special operations on the buttonhole machine (gauged buttonholes). For each topic these components are provided: an introduction, directions, an objective, learning activities, student information, a student self-check, and a check-out activity. An instructor's final checklist for evaluating the students' performance is attached. (YLB)

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MODULE 13

THE BUTTONHOLE MACHINE

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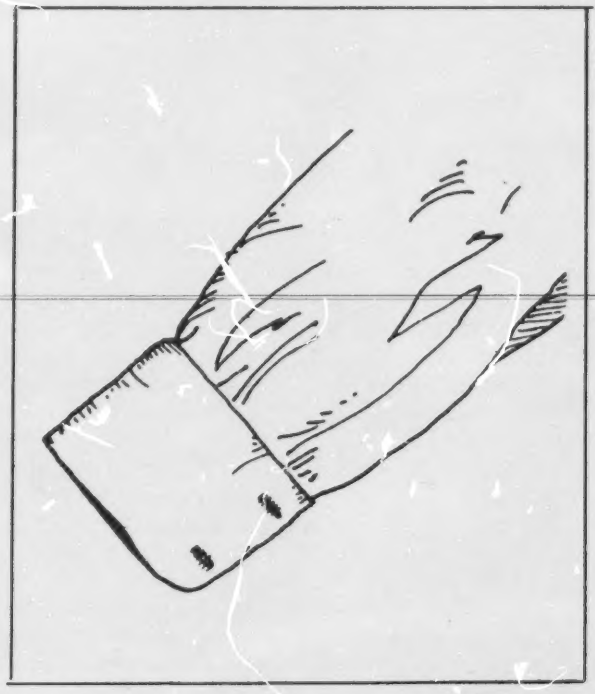
parts and purpose



PERFORMING SPECIAL OPERATIONS ON THE BUTTONHOLE MACHINE
(Parts and Purpose)

INTRODUCTION

The buttonhole is a form of closure and is an important part of the "finished product" of any garment. Buttonholes vary in size and type, but accuracy and uniformity are necessary to prevent the garment from becoming a reject.

In this module you will learn about horizontal and vertical buttonholes. You will also learn the parts of the automatic buttonhole machine.

DIRECTIONS

Read the Objective. If you think you can accomplish this Objective now, turn to the Check-Out Activity and follow the instructions.

If you feel you are not able to accomplish this Objective now, look at the Learning Activities. Begin the Learning Activities and as soon as you feel you are ready, turn to the Check-Out Activity and follow the instructions.

OBJECTIVE

Given an automatic buttonhole machine or a diagram, identify the parts and their purposes with 100 per cent accuracy.

LEARNING ACTIVITIES

1. READ Student Information, THE AUTOMATIC BUTTONHOLE MACHINE.
2. COMPLETE Student Self-Check, THE AUTOMATIC BUTTONHOLE MACHINE.
3. TURN to the Check-Out Activity and follow the instructions.

STUDENT INFORMATION

The Automatic Buttonhole Machine

Buttonholes are used on clothing for women, men, and children. The buttonhole is located on the right side of the opening for women and on the left side for men. Usually buttonholes are vertical on garments for men and women but because children need more "give" in the chest area, the buttonholes are horizontal.

Both horizontal and vertical buttonholes are made on an automatic buttonhole machine. The direction of the buttonhole depends on how you feed the fabric into the machine. The automatic buttonhole machine is shown in Figure 1. When making a buttonhole, this machine completes a cycle which includes stitching, cutting, trimming the thread, and stopping with clamps in a raised position.

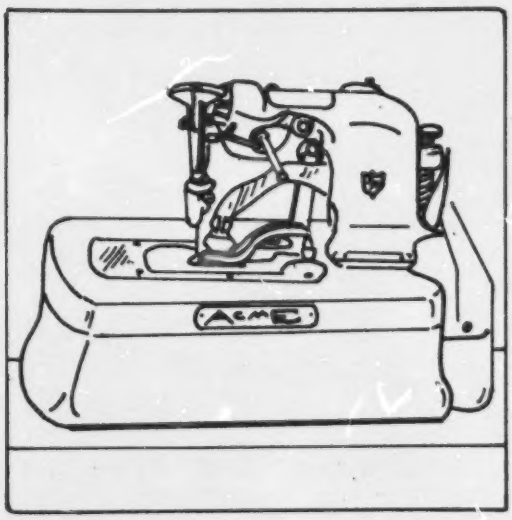


Figure 1

The finished buttonhole will look similar to Figure 2. Although the machine is automatic and the operator does not have to guide the sewing, the process is a combination of bar tacking and the zig zag stitch.

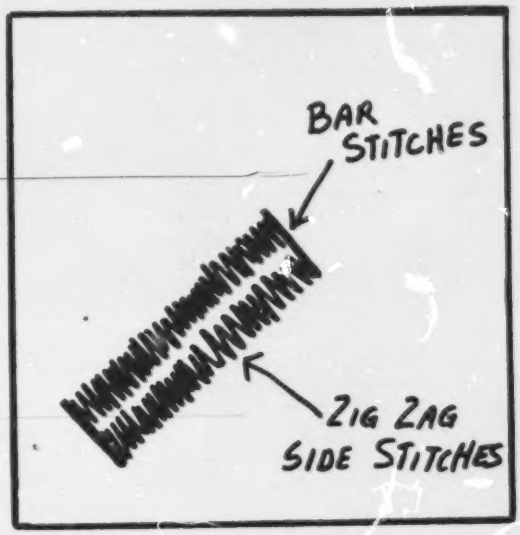


Figure 2

Some buttonholes are a form of chainstitching and can ravel easily. There is no bobbin used.

Figure 3 shows a horizontal buttonhole. Note the side stitches, barring stitches and the cut in the buttonhole.

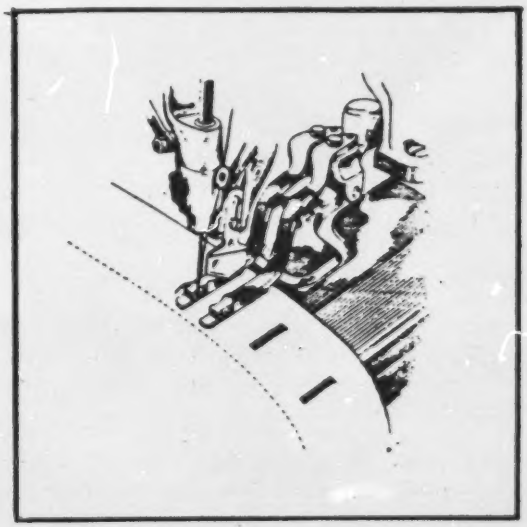


Figure 3

Figure 4 illustrates a vertical buttonhole which was made in one complete cycle on the automatic machine.

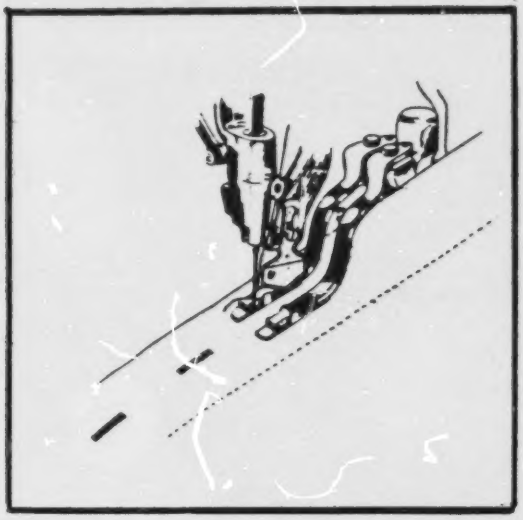


Figure 4

Horizontal and vertical buttonholes made on an automatic machine are sometimes called "cut-after" buttonholes. After the stitching stages of the cycle are complete, a knife attached to the machine automatically cuts the buttonhole. The knives come in various sizes and are changed to meet specifications for buttonhole size. Figure 5 shows the different sizes of knives.

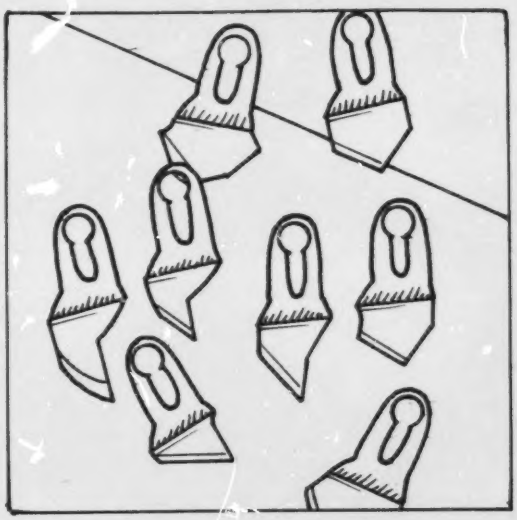


Figure 5

In the event of thread breakages or other emergency situations, only the eyelet buttonhole machine can be stopped before the cutting operation takes place.

Since the machine is highly precise in operation and somewhat delicate, your instructor will demonstrate the steps to be followed in case of an emergency.

THE AUTOMATIC BUTTONHOLE MACHINE

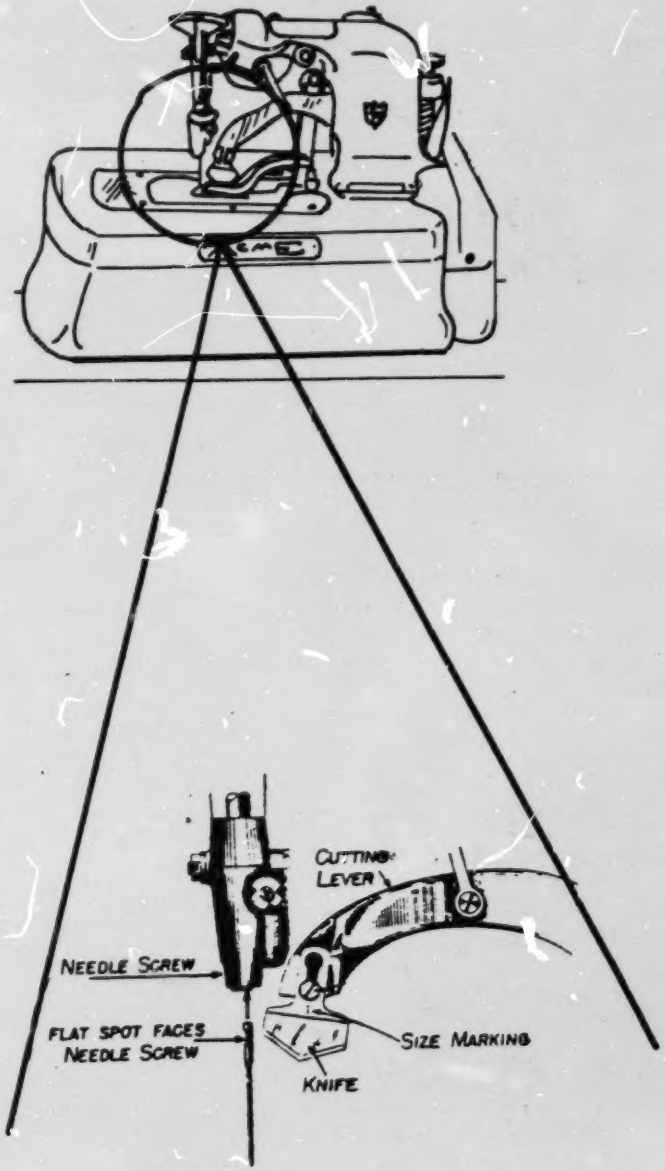


Figure 6

STUDENT SELF-CHECK

The Automatic Buttonhole Machine

Write the answers to the following statements on a separate sheet of paper.

1. A horizontal or vertical buttonhole made on an automatic buttonhole machine is sometimes called a _____.

2. When making a buttonhole, the automatic buttonhole machine completes a cycle including _____, _____, _____, and _____.

3. The stitches at the end of the buttonhole are _____.

CHECK-OUT ACTIVITY

The statement below explains the activity you must complete in order to finish this module. After you go through the activity, your instructor will rate your performance using the Instructor's Final Checklist, PERFORMING SPECIAL OPERATIONS ON THE BUTTONHOLE MACHINE (Parts and Purpose).

Your instructor will provide you with a buttonhole machine or a diagram. Identify parts of the machine and the purpose of each part.

Student _____

Date _____

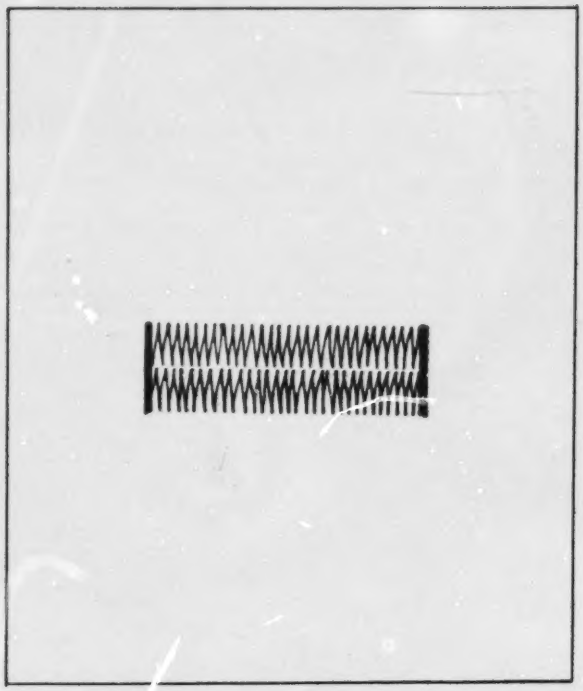
Instructor's Final Checklist

Check the student's performance in the following elements of performing special operations on the buttonhole machine (parts and purpose).
Place an X in the appropriate box indicating not accomplished, partially accomplished, or fully accomplished. If, because of special circumstances, the item was impossible to complete, place an X in the "Not Applicable" box.

Performance Level: All items must receive a rating of FULLY ACCOMPLISHED (or Not Applicable). If any items are rated Not Accomplished or Partially Accomplished, the student and instructor will discuss this and decide which learning activities must be repeated.

	Student Performance			
	Not Applicable	Not Accomplished	Partially Accomplished	Fully Accomplished
The student:				
a. Identified the parts.	( )	( )	( )	( )
b. Identified the purpose of the parts.	( )	( )	( )	( )

gauged buttonhole



PERFORMING SPECIAL OPERATIONS ON THE BUTTONHOLE MACHINE
(Gauged Buttonholes)

INTRODUCTION

The buttonhole is an important part of the "finished product" of any garment. Buttonholes vary in size and type, but accuracy and uniformity are necessary to prevent the garment from becoming a reject.

In this module you will learn about gauged buttonholes. In most cases, the gauge is placed so that the garment is aligned according to a guide; the buttonhole itself becomes a true part of the garment.

DIRECTIONS

Read the Objective. If you think you can accomplish this Objective now, turn to the Check-Out Activity and follow the instructions.

If you feel you are not able to accomplish this Objective now, look at the Learning Activities. Begin the Learning Activities and as soon as you feel you are ready, turn to the Check-Out Activity and follow the instructions.

OBJECTIVE

Given a simulated blouse front, buttonhole machine, screwdriver, and gauges, make three gauged buttonholes. The buttonholes must be evenly spaced and uniformly stitched.

LEARNING ACTIVITIES

1. READ Student Information, STEPS IN MAKING GAUGED BUTTONHOLES.
2. VIEW a teacher demonstration on using the automatic buttonhole machine when making gauged buttonholes.
3. COMPLETE Student Self-Check, MAKING GAUGED BUTTONHOLES.
4. TURN to the Check-Out Activity and follow the instructions.

STUDENT INFORMATION

Steps in Making Gauged Buttonholes

1. Secure a piece of cloth and fold under a facing to look like a blouse front.

2. Take the cloth to the automatic buttonhole machine. Use a ruler to mark the location for five buttonholes.

3. Check to see that the machine is threaded correctly and set for the right size button. Figure 7 illustrates a gauge attachment.

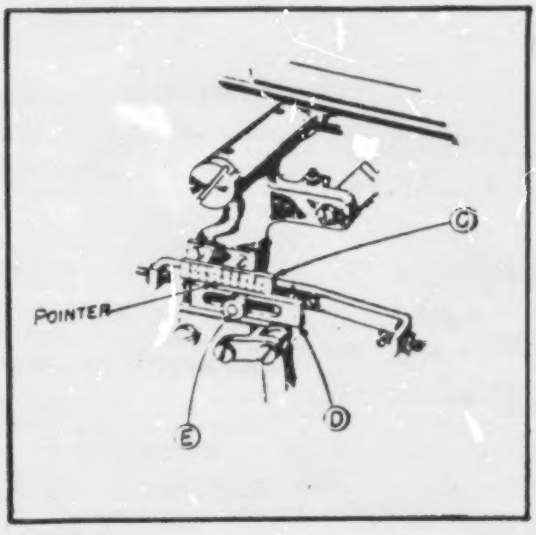


Figure 7

Should the gauge be set on the wrong length, simply tip the machine back on its hinges and follow these directions (Figure 7).

Loosen nut (E) and slide plate (D) until pointer is opposite the size desired as shown on the length gauge (C). Then tighten nut (E) securely.

To change the knife for the correct size buttonhole, loosen the screw and remove knife from cutting lever. Then install knife with size marking that corresponds with that chosen on the length gauge. Tighten the screw securely.

Once the correct buttonhole size is set on the gauge and the correct size knife is installed, practice making five buttonholes.

Figure 8 shows a buttonhole machine with spacing gauge for setting the distance between buttonholes.

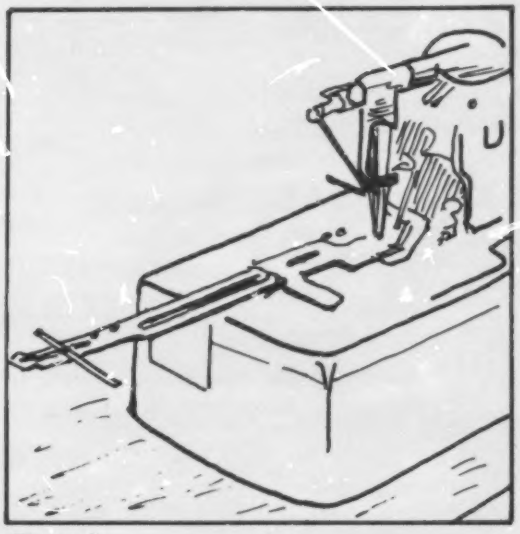


Figure 8

Some buttonhole machines have a panic lever located under the stand. When activated, this lever will immediately stop the machine. Thread breakage or mislocation of the buttonhole are reasons for activating the panic lever. To correct the problem, push the reset button located on the right side of the machine and proceed.

STUDENT SELF-CHECK

Gauged Buttonholes

Write the answers to the following statements on a separate sheet of paper.

1. All gauged buttonholes are the same size. (True or false)

2. A ruler should be used to set the gauge to the correct size of the button. (True or false)

3. When setting the gauge for the buttonhole, the size of the knife must also be changed to fit the buttonhole. (True or false)

4. Thread breakage is the only reason for activating the panic lever and stopping the machine. (True or false)

CHECK-OUT ACTIVITY

The statement below explains the activity you must complete in order to finish this module. After you go through the activity, your instructor will rate your performance using the Instructor's Final Checklist, PERFORMING SPECIAL OPERATIONS ON THE BUTTONHOLE MACHINE (Gauged Buttonholes).

Your instructor will provide you with a buttonhole machine, screwdriver, and gauges. Make three gauged buttonholes that are evenly spaced and uniformly stitched.

Student _____

Date _____

Instructor's Final Checklist

Check the student's performance in the following elements of performing special operations on the buttonhole machine (gauged buttonholes).
Place an X in the appropriate box indicating not accomplished, partially accomplished, or fully accomplished. If, because of special circumstances, the item was impossible to complete, place an X in the "Not Applicable" box.

Performance Level: All items must receive a rating of FULLY ACCOMPLISHED (or Not Applicable). If any items are rated Not Accomplished or Partially Accomplished, the student and instructor will discuss this and decide which learning activities must be repeated.

	Student Performance			
	Not Applicable	Not Accomplished	Partially Accomplished	Fully Accomplished
The student:				
a. Gauged the buttonhole correctly for the size button.	( )	( )	( )	( )
b. Placed the buttonhole correctly on the material.	( )	( )	( )	( )
c. Selected the accurate knife for the buttonhole and secured it correctly.	( )	( )	( )	( )